Facts About *Astragalus magdalenae* var. *peirsonii* (Peirson's milk-vetch)

What is Peirson's milk-vetch?
Astragalus magdalenae var. *peirsonii* (Peirson's milk-vetch) is a native member of the pea family that grows in open sand dune areas within a vegetation community referred to as psammophytic (sand-loving) scrub.

Astragalus Magdalenae var. *Peirsonii* (Peirson's milk-vetch) Photo Credit: USFWS

Where is Peirson's milk-vetch found?
Historically, Peirson's milk-vetch was reported from the Borrego Valley in San Diego County and portions of the Algodones Dunes in Imperial County. It is also known to occur in the Gran Desierto of Sonora, Mexico.

Peirson's milk-vetch is not found in the Borrego Valley, leaving the Algodones Dunes the only remaining location in the United States that supports a population of the plant.

The Algodones Dunes lie within the Sonoran Desert, one of the hottest, driest areas in the United States. This large dune mass is approximately 40 miles long, running in a northwest to southeasterly direction. It ranges from 2 to 5 miles wide.

Within the Algodones Dunes, Peirson's milk-vetch is found mostly in the more interior portions of the dunes.

Fruits and seeds of Peirson's milk-vetch. Photo Credit: USFWS

What is the life cycle of Peirson's milk-vetch?
To survive in the harsh climate where it grows, the plant has a long taproot that enables it to reach moist areas deep in the sand. The long taproot also serves as an anchor for the plant in the face of strong winds.

Peirson's milk-vetch produces delicate purple flowers and large, papery fruits that contain small black seeds. As the fruits dry out they open slightly at one end or drop off the plant, releasing the seeds which are scattered across the dunes by the prevailing winds.

Peirson's milk-vetch generally flowers and produces seeds between October and May, although germination in any given year is dependent on rainfall. Because rainfall in the Algodones is very limited and irregularly distributed, Peirson's milk-vetch plants tend to have scattered occurrences within the dunes. Over time it appears as though the plants are moving, but in fact, they are responding to environmental conditions within the dunes that allow seeds in a particular area to germinate.

A study by Arthur Philips and Debra Kennedy in 2002 noted that plants in their first year produced about 5 fruits per plant, but plants older than one season produced up to 171 fruits. It is important for Peirson's milk-vetch plants to survive more than one season so that the seed bank can be maintained.